7. (Amended) The solution of claim 6, wherein said quaternary ammonium compound ranges from greater than 10% by weight to about 40% by weight.

8. (Amended) The solution of claim 7, wherein said quaternary ammonium compound ranges from greater than 10% weight to about 30% weight.

44. (New) A concentrated quaternary ammonium compound solution consisting essentially of:

a quaternary ammonium compound with a concentration from greater than 10% by weight; and

at least one solubility enhancing agent.

45. (New) The solution of claim 44, wherein said quaternary ammonium compound is present at a concentration of about 40% by weight and said solubility enhancing agent is present at a concentration ranging from about 50 to about 60% by weight.

46. (New) The solution of claim 45, wherein said quaternary ammonium compound is cetylpyridinium chloride and said solubility enhancing agent is propylene glycol.

REMARKS

Applicants thank Examiner McQueeney for kindly discussing the rejections, the prior art reference Hall, and claim language with Applicants' attorney. Applicants acknowledge the Interview Summary Form dated April 2, 2001 from Examiner McQueeney.

Applicants affirm the election of Group I, claims 1-39. Claims 40-43 have been canceled without prejudice or disclaimer as directed to non-elected subject matter. Applicants reserve the right to file a divisional application on the subject matter of these non-elected claims.

Claims 1 and 5-8 have been amended and claims 44-46 have been added. Claims 40-43 were canceled without prejudice or disclaimer. Claims 1-39 and 44-46 are presently pending. The amended claims are supported by the specification as filed. Specific support for the language "greater than 10%" in claims 1 and 5-8 is found on page 8, line 5; page 12, lines 25-26 and page 13, lines 19-24.

1. Rejection under 35 U.S.C.§ 102(b)

Claims 1-8, 10-13, 25-27, 31 and 34-38 are rejected as being anticipated by Hall (U.S. 5,405,604) ("Hall"). The Examiner alleges that Hall discloses a concentrated mouthrinse comprising about 0.05% to about 10% cationic antimicrobial agent, about 30 to about 85% of propylene glycol, polyethylene glycol, and mixtures thereof; and water as recited in claim 1. Applicants note that the mouthrinse of claim 1 also contains from about 0.2% to about 9.0% of a flavoring oil.

In regard to claim 1, Applicants have amended this claim and dependent claims 5-8 by deleting "about" to more clearly define the present invention.

In regard to claim 31, the claimed concentrated quaternary ammonium compound (QAC) solution is limited by the language "consisting essentially of" to a QAC and at least one solubility enhancing agent. This language allows the addition of water to the solution and other non-essential components that do not materially affect the properties of the claimed solution. The Examiner alleges that Hall anticipates claim 31, and therefore takes the position that the flavoring oil of Hall's composition claimed in claim 1 is a non-essential component of Hall's composition.

Although Applicants respectfully disagree with this assessment by the Examiner and believe that Hall considers the flavoring oil to be an essential ingredient of his disclosed mouthrinse, Applicants believe that the focus should be on the interpretation of the transitional phrase "consisting essentially of" in claim 31 and its dependent claims. In this regard when this phrase precedes a list of ingredients in a composition claim, the claim typically limits the scope of a claim to the specified materials or steps that "...do not materially affect the basic and novel properties of the claimed invention." (See *PPG Industries Inc. v. Guardian Industries Corp.*, 48 USPQ2d 1351, 1354 (Fed.Cir. 1998); *In re Herz*, 537 F.2d 549, 551-552 (CCPA 1976); Manual of Patent Examining Procedure Section 2111.03 (7th Ed. 1998, First Rev. Feb. 2000, emphasis added).

Applicants' claimed solution in its preferred embodiment is useful for treating food products, and thus the addition of a flavoring oil, as disclosed in Hall's composition, would materially affect the solution of the claimed invention. The flavoring oil would materially alter the taste, appearance, color and texture of the food product being treated. As indicated on page 10, lines 4-7, the use of the claimed solution "...does not alter the appearance, color, taste, and texture of the food product."

Although Applicants contend that the claimed solution would be materially affected by the inclusion of a flavoring oil for contacting the claimed solution with food products, Applicants further contend that the inclusion of flavoring oil in the claimed solution for use in preventing the growth of microorganisms on, sanitizing or cleaning surfaces, liquids, equipment, animals, plants or any surface that would come into contact with food products during processing, preparation, storage and/or packaging would be materially affected by the inclusion of a flavoring oil. For example, the flavoring oil would add a greasy layer to these surfaces, which would not be a desirable effect of using the claimed solution.

For all of these reasons, Applicants believe that the inclusion of the flavoring oil in the claimed solution of claims 31 would materially affect the basic and novel properties of the claimed invention. In view of the arguments above, it is requested that this rejection be withdrawn in regard to all of the rejected claims.

2. Rejection under 35 U.S.C. §103

Claims 1-39 are rejected as obvious over Hall in view of Dickson (U.S. 5,520575). The Examiner alleges that Hall discloses a maximum concentration of cationic antimicrobial agent of about 10%. The Examiner alleges that Hall does not disclose a concentration of cationic antimicrobial agent of about 15%; about 20%, and about 40%. The Examiner further alleges that Dickson, in column 4, lines 12-35, that the concentration of antimicrobial agents typically range from about 1 to about 30%. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention was made to vary the concentration of the antimicrobial agent and delivery mechanism based on its intended purpose with the expected result being a successful product.

Applicants respectfully disagree with the examiner's interpretation of Dickson. Dickson discloses a method for reducing contamination of animal carcasses during

slaughtering comprising applying a wetting solution to the carcass concurrently with hide removal. Moreover, Dickson states that the wetting solution reduces the stickiness of the exposed carcass surface so fewer contaminants adhere to the surface, or adhere less tightly, thus improving subsequent cleaning efficiency. From a reading of Dickson, the important property of the wetting solution is the reduction of the stickiness of the surface of the carcass by reducing surface tension that results from a residual film of water on the surface of the carcass following treatment. Dickson surmises that this film of water likely hydrates the surface proteins which begin to uncoil, destroying the characteristic shape of the protein and along with it the characteristic adhesive property. Further in this regard, Dickson states that the water layer interferes with the binding of contaminants to the carcass surface.

Although the wetting solution of Dickson may contain an aqueous antimicrobial solution, the presence of this agent is not necessary in a method of reducing contamination as disclosed in Dickson. In fact, water alone works well to reduce contamination and is sufficient for the efficacy of the claimed method.

In column 4, lines 29-35 of Dickson, as referenced by the Examiner, it is recited that the concentration of the antimicrobial agent depends on the particular antimicrobial agent or combination of agents used or the degree of contamination. Dickson then recites ranges of concentrations of antimicrobial agents useful in the claimed method.

Applicants respectfully disagree with the Examiner rationale for combining Hall and Dickson to allegedly render the claimed composition obvious. The Examiner's rejection appears to be suggesting that it would be obvious to modify the mouthrinse of Hall as suggested by Dickson, which according to the Examiner, suggests that it would be obvious to vary the concentration of the antimicrobial agent and delivery mechanism based upon the intended purpose of the antimicrobial agent. But the Dickson wetting solution does not require the presence of an antimicrobial agent for the solution to function to reduce contamination. In this regard, "[a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 31 USPQ2d 1130 (Fed. Cir. 1994). Thus, a person skilled in the art would not necessarily be motivated to combine the teachings of Hall and Dickson to arrive at the composition of the present invention. In fact, if a skilled person read that Dickson's

wetting solution does not require an antimicrobial agent, and yet still reduces microbial contamination, there is no motivation to combine Hall and Dickson.

Applicants respectfully point out that the Examiner must show all of the recited claim elements in the combination of references that make up the rejection. When combining elements to make out a *prima facie* case of obviousness, the Examiner is obliged to show by reference to specific evidence in the cited references that there was (i) a suggestion to make the combination and (ii) a reasonable expectation that the combination would succeed. Both the suggestion and reasonable expectation must be found within the prior art, and not be gleaned from Applicants' disclosure. *In re Vaeck*, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); *In re Dow Chemical Co.*, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). The Examiner has failed to support the alleged case of *prima facie* obviousness, and as a result of these deficiencies, it is requested that this rejection be withdrawn.

Applicants further wish to point out that a solution containing a concentration of QAC of greater than 10%, and in some claims the QAC concentration is as high as about 60% by weight, in combination with at least one solubility enhancing agent, is an important aspect of the claimed solution. The claimed concentrated QAC solution provides the user with a solution that is easier and less costly to ship and minimizes the storage requirements to the supplier and the end user. Additionally, providing the QAC solution in concentrated form reduces the problems associated with the inhalation of irritating QAC powder by the end user and reduces serious foaming problems by minimizing the foaming that occurs during preparation. Moreover, the claimed solution can be subjected to colder temperature during shipping and storage without precipitation of the QAC, than a concentrated solution without a solubility enhancing agent. The Examiner is invited to review the many advantages of the claimed concentrated composition in the paragraph bridging pages 12 and 13 of the specification, and take these advantages of the claimed solution into consideration, and withdraw the rejection.

As a result of all of the arguments provided above, it is requested that the Examiner withdraw the rejection of claims 1-39.

CONCLUSION

The present response is intended to be a complete response to the Examiner's Office Action. It is believed that the above arguments and amendments to the claims place the application in condition for allowance, and a notice to that effect is respectfully requested. If there are any minor issues which can be taken care by telephone, it is requested that the Examiner contact the undersigned attorney at telephone number below.

Respectfully submitted,

April 30, 2001
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MARKED-UP VERSION OF CLAIMS

1. (Amended) A concentrated quaternary ammonium compound solution comprising:

a quaternary ammonium compound with a concentration from greater than **[about]** 10% by weight; and

at least one solubility enhancing agent.

5. (Amended) The solution of claim 4, wherein said quaternary ammonium compound ranges from greater than **[about]** 10% by weight to about 60% by weight.

6. (Amended) The solution of claim 5, wherein said quaternary ammonium compound ranges from greater than **[about]** 10% by weight to about 50% by weight.

7. (Amended) The solution of claim 6, wherein said quaternary ammonium compound ranges from greater than **[about]** 10% by weight to about 40% by weight.

8. (Amended) The solution of claim 7, wherein said quaternary ammonium compound ranges from greater than **[about]** 10% weight to about 30% weight.